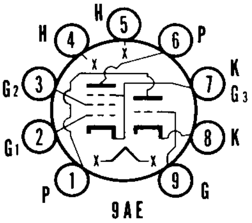


SYLVANIA TYPE 6GJ8

TRIODE-PENTODE



MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	6-2
Basing	9AE
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage[3]	6.3 Volts
Heater Current[4]	600 Ma
Heater Warm-up Time[1]	11 Seconds
Max. Heater Voltage Range (Parallel Supply)[2]	5.7-6.9 Volts
Max. Heater Current Range (Series String Supply)[2]	560-640 Ma
Heater-Cathode Voltage (Design Maximum System)	
Heater Negative with Respect to Cathode	
Total D C and Peak	200 Volts Max.
Heater Positive with Respect to Cathode	
D C	100 Volts Max.
Total D C and Peak	200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES

	Shielded[5]	Unshielded
Triode Section		
Grid to Plate	2.6	2.6 $\mu\mu$f
Input: g to (h+k+Pk, g3, I.S.)	3.6	3.4 $\mu\mu$f
Output: p to (h+k+Pk, g3, I.S.)	2.4	1.6 $\mu\mu$f
Pentode Section		
Grid No. 1 to Plate	0.025	0.036 $\mu\mu$f Max.
Input: g1 to (h+k, g3, I.S. + g2)	8.0	8.0 $\mu\mu$f
Output: p to (h+k, g3, I.S. + g2)	3.2	2.4 $\mu\mu$f

RATINGS (Design Maximum System)

	Triode Section	Pentode Section
Plate Voltage	330	330 Volts Max.
Grid No. 2 Voltage	See 6AM8 Rating Chart	
Grid No. 2 Supply Voltage	—	330 Volts Max.
Positive Grid Voltage	0	0 Volts Max.
Plate Dissipation	2.5	2.5 Volts Max.
Grid No. 2 Dissipation	—	0.55 Watt Max.
Grid No. 1 Circuit Resistance		
Fixed Bias	1.0	— Megohm Max.
Self Bias	2.2	— Megohms Max.

CHARACTERISTICS AND TYPICAL OPERATION

	Triode Section	Pentode Section
Class A1 Amplifier		
Plate Voltage	125	125 Volts
Grid No. 2 Voltage	—	125 Volts
Grid No. 1 Voltage	−1.0	−1.0 Volts
Plate Current	13.5	12 Ma
Grid No. 2 Current	—	4.5 Ma
Transconductance	8500	7500 μmhos
Amplification Factor	40	—
Plate Resistance (approx.)	5000	150,000 Ohms
Ec1 for Ib = 20 μa (approx.)	−9	−6.5 Volts

NOTES:

1. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of its rated value after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times rated heater voltage divided by rated heater current.
2. Design-Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron device of a specified type as defined

by its published data, and should not be exceeded under the worst probable conditions.
The device manufacturer chooses these values to provide acceptable serviceability of the device, taking responsibility for the effects of changes in operating conditions due to variations in device characteristics.
The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, and environmental conditions.

3. For parallel heater operation, equipment should be designed so that at normal supply voltage bogey tubes will operate at this value of heater voltage.
4. For series heater operation, equipment should be designed so that at normal supply voltage bogey tubes will operate at this value of heater current.
5. With external JEDEC No. 315 shield connected to cathode of section under test.

APPLICATION

The Sylvania Type 6GJ8 is a miniature tube which contains a sharp cutoff pentode and a medium mu triode in one envelope.
The pentode section is intended primarily for service as an oscillator in the horizontal deflection system of television receivers.
Type 6GJ8 has controlled heater warm-up time for series string operation.